

45

SEQUENCE LISTING

<110> HASHIMOTO, Koji
ASHIMOTO, Michie
MISHIRO, Shunji
OTA, Yasuhiko

<120> DETECTION OF NUCLEIC ACID ASSOCIATED WITH DISEASE

<130> 220633US2SRDPCT

<140> US 10/070,415

<141> 2002-03-15

<150> PCT/JP02/02030

<151> 2002-03-05

<150> JP 2001-090053

<151> 2001-03-27

<150> JP 2001-284112

<151> 2001-09-18

<160> 72

<170> PatentIn version 3.1

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gagcctccgg agcaccttga tcctcagacg ggcctgatga aacgagcatc tgattcagca      360
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aggtgcgggg ccaggagcta ggtttcgttt ctgctcccgg agccgccctc agcacagggt      480
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gccctgggag ggaactgaag accccaatt accaatgcat ctgttttcaa aaccgacggg      240
gggaaggaca tgcctaggtt caaggatacg tgcaggcttg gatgactccg ggccattagg      300
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aggtgcgggg ccaggagcta ggtttcgttt ctgcncccg agccgccctc agcacagggt      480
ctgtgagttt catttcttcg ccggcgcggg gcggggctgg gcgcggggtg aaagaggcga      540
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<210> 38
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<220>
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ctgcagccat tggcacacaa tgcctgggag tccctgctgg tgctgggatc atcccagtga      180
gccctgggag ggaactgaag accccaatt accaatgcat ctgttttcaa aaccgacggg      240
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ctgtgagttt catttcttcg ccggcgcggg gcggggctgg gcgcggggtg aaagaggcga      540
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 <223> n is a nucleotide selected from a, g, c, or t

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<220>
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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
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<400> 43
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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
 gtctctggagg ggaatcagct gccagatac aaagatggga ttcagggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatatt gttctcactg 420
 ccacagaaag catgtttata gtcttccagc agcaacgcca ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac 540
 gcagtgtcac aaggaatgtt tactttttcca aatccccagc tagaggccag ggatgggtca 600
 tctatattcta tatagcctgc acccagattg taggacagag ggcatgctng gtaaatatgt 660
 gttcattaac tgagattaac cttccctgag ttttctcaca ccaagggtgag gaccatgtcc 720
 ctgtttccat cactccctct ccttctcctg agtatgggtgg cagcgtctta ctcagaaact 780
 gtgacctgtg aggatgcca aaagacctgc cctgcagtga ttgcctgtag ctctccaggc 840
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 ggtacgtgtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg 960
 gatatgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa 1020
 acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc 1080
 aggaaagtgg cccacaggtc aggccatccc gtgggacaca ggatgaattt ttcttctctg 1140
 ggtcattgtc atgtcagacc cctattcact tcagtaggga tggcaccagg ttcaagaggc 1200
 caaagaagag atggagtcag caaacaaca taggttttac tgggggaatc tgtttacagg 1260

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gagatccagc agcagtgggc tggacaggag aacaacaact actggtaaaa acaaatgcag 1320
ttaattttca ctttgcaccc tccctgcagc aacctccacg tggcaacttt atttcttaag 1380
ttattgctct caggtgcaca ccatacagtt attgagagca gtgctcagaa aggtcagtcc 1440
tgggtcaagg tctcccttct cctgagaagg gattgggcat caaactcttg aagagagaga 1500
gcaagaacat agatattaag tcacatttcc tttgtcttcc aacaggccaa gggctcagag 1560
gcttacaggg cccccctgga aagttggggc ctccaggaaa tccagggcct tctgggtcac 1620
caggaccaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac ccagcaagg 1680
tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgccccttc 1740
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tc 1802

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<210> 44
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
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<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (868)..(868)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (875)..(875)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (884)..(884)
<223> n is a nucleotide selected from a, g, c, or t

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<400> 44

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gaattcctgc	cagaaagtag	agaggtat	agcactctgc	cagggccaac	gtagtaagaa	60
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ccagttaatt	ctgggctggg	ttgggtgacta	aggttgaggt	tgatctgagg	ttgagacctt	180
cctcttttga	tcaccagctt	tcagctcagg	gcctgccaat	gagtaaatga	tagttaacag	240
gtcctggagg	ggaatcagct	gcccagatac	aaagatggga	ttcaggtggc	agatggaccc	300
gaagaggaca	tggagagaaa	gaggaagctc	ctacagacac	ctgggtttcc	actcattctc	360
attcccctaag	ctaacaggca	taagccagct	ggcaatgcac	ggtcccattt	gttctcactg	420
ccactgaaag	catgtttata	gtcttccagc	agcaacgcca	ggtgtctagg	cacagatgaa	480
cccctcctta	ggatccccac	tgctcatcat	agtgcctacc	tttgttaaag	tactagtcac	540
gcagtgtcac	aaggaatgtt	tacttttcca	aatccccagc	tagaggccag	ggatgggtca	600
tctattttcta	tatagcctgc	accagattg	taggacagag	ggcatgctng	gtaaatatgt	660
gttcattaac	tgagattaac	cttccctgag	ttttctcaca	ccaaggtgag	gaccatgtcc	720
ctgtttccat	cactccctct	ccttctcctg	agtatgggtg	cagcgtctta	ctcagaaact	780
gtgacctgtg	aggatgcca	aaagacctgc	cctgcagtga	ttgcctgtag	ctctccaggc	840
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ggtagctgtt	gggctgttct	gtctctgcaa	ttctttacct	tccagaggaa	actgcctggg	960
gatatgagga	gactgatgtc	ctatttgagt	atatttttct	caactatact	gtaactcaaa	1020
acagagattc	agctcgaatt	ccacacagca	gtttgtgact	aatagttgtc	ttgccagccc	1080
aggaaagtgg	cccacaggtc	aggccatccc	gtgggacaca	ggatgaattt	ttcttctctg	1140
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caaagaagag	atggagtcag	caaacaaaca	taggtttttac	tgggggaatc	tgttttacagg	1260
gagatccagc	agcagtgggc	tggacaggag	aacaacaact	actggtaaaa	acaaatgcag	1320
ttaattttca	ctttgcaccc	tccttcagc	aacctccacg	tggcaacttt	atttcttaag	1380
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gcaagaacat	agatattaag	tcacatttcc	tttgtcttcc	aacaggccaa	gggctcagag	1560
gcttacaggg	ccccctgga	aagttggggc	ctccaggaaa	tccagggcct	tctgggtcac	1620
caggaccaa	gggccaaaaa	ggagaccctg	gaaaaagtcc	gggtaaggac	cccagcaagg	1680
tctgagctga	cttcacccag	ggttctgaga	ccttgagtat	ctggtaagag	gtgccccttc	1740

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tc 1802

<210> 45
<211> 1802
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (868)..(868)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (884)..(884)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

<400> 45
gaattcctgc cagaaagtag agaggtatth agcactctgc cagggccaac gtagtaagaa 60
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ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
cctctttgga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
gtcctggagg ggaatcagct gccagatac aaagatggga ttcagggtggc agatggaccc 300
gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatth gttctcactg 420
ccacngaaag catgtttata gtcttcagc agcaacgcca ggtgtctagg cacagatgaa 480

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ccccctcctta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac      540
gcagtgtcac aaggaatggt tactttttcca aatccccagc tagaggccag ggatgggtca      600
tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt      660
gttcattaac tgagattaac cttccctgag ttttctcaca ccaagggtgag gaccatgtcc      720
ctgtttccat cactccctct ctttctcctg agtatgggtgg cagcgtctta ctcagaaact      780
gtgacctgtg aggatgcca aaagacctgc cctgcagtga ttgcctgtag ctctccaggc      840
atcaacggct tcccaggcaa agatgggngt gatggcacca aggnagaaaa gggggaacca      900
ggtacgtggt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg      960
gatatgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa    1020
acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc    1080
aggaaagtgg cccacaggtc aggccatccc gtgggacaca ggatgaattt ttcttctctg    1140
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gcaagaacat agatattaag tcacatttcc tttgtcttcc aacaggccaa gggctcagag    1560
gcttacaggg cccccctgga aagttggggc ctccaggaaa tccagggcct tctgggtcac    1620
caggacaaaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac ccagcaagg    1680
tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgcccttc    1740
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tc                                                                    1802

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<210> 46
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
 <221> misc_feature
 <222> (425)..(425)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
 <221> misc_feature
 <222> (649)..(649)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
 <221> misc_feature
 <222> (868)..(868)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
 <221> misc_feature
 <222> (884)..(884)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 46
 gaattcctgc cagaaagtag agaggtatth agcactctgc cagggccaac gtagtaagaa 60
 atttccagag aaaatgctta cccaggcaag cctgtntaaa acaccaaggg gaagcaaact 120
 ccagttaatt ctgggctggg ttgggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
 gtctctggagg ggaatcagct gccagatac aaagatggga ttcaggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccattt gttctcactg 420
 ccacngaaag catgtttata gtcttcacgc agcaacgcca ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgccctacc tttgttaaag tactagtcac 540
 gcagtgtcac aaggaatgtt tactttttcca aatccccagc tagaggccag ggatgggtca 600
 tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt 660
 gttcattaac tgagattaac cttccctgag ttttctcaca ccaaggtgag gaccatgtcc 720
 ctgtttccat cactccctct ctttctctg agtatggtgg cagcgtctta ctcaaaaact 780
 gtgacctgtg aggatgcca aaagacctgc cctgcagtga ttgcctgtag ctctccaggc 840
 atcaacggct tcccaggcaa agatgggngt gatgacacca aggnagaaaa gggggaacca 900

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ggtaacgtggtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg      960
gatatgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa    1020
acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc    1080
aggaaagtgg cccacaggtc aggccatccc gtgggacaca ggatgaattt ttcttctctg    1140
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caaagaagag atggagtcag caaacaacaa taggtttttac tgggggaatc tgtttacagg    1260
gagatccagc agcagtgggc tggacaggag aacaacaact actggtaaaa acaaatgcag    1320
ttaattttca ctttgcaccc tccttcagc aacctccacg tggcaacttt atttcttaag    1380
ttattgctct caggtgcaca ccatacagtt attgagagca gtgctcagaa aggtcagtcc    1440
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gcaagaacat agatattaag tcacatttcc tttgtcttcc aacaggccaa gggctcagag    1560
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caggaccaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac ccagcaagg    1680
tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgccccttc    1740
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tc                                                                    1802

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<210> 47
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

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<220>

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<221> misc_feature
 <222> (868)..(868)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (884)..(884)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 47
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 atttccagag aaaatgctta cccaggcaag cctgtntaaa acaccaaggg gaagcaaact 120
 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaata tagttaacag 240
 gtcttgagg ggaatcagct gccagatac aaagatggga ttcaggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
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 ccacngaaag catgtttata gtcttcagc agcaacgcc ggtgtctagg cacagatgaa 480
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 gcagtgtcac aaggaatgtt tactttttcca aatccccagc tagaggccag ggatgggtca 600
 tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaataatgt 660
 gttcattaac tgagattaac cttccctgag tttcttcaca ccaaggtgag gaccatgtcc 720
 ctgtttccat cactccctct ctttctcctg agtatgggtg cagcgtctta ctcagaaact 780
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 ggtacgtgtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg 960
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 aggaaagtgg cccacaggctc aggccatccc gtgggacaca ggatgaattt ttcttctctg 1140
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 caaagaagag atggagtcag caaacaaca taggttttac tgggggaatc tgtttacagg 1260
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tc 1802

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<210> 48
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
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<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

```

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<220>
<221> misc_feature
<222> (868)..(868)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (884)..(884)
<223> n is a nucleotide selected from a, g, c, or t

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<400> 48
gaattcctgc cagaaagtag agaggtatct agcactctgc cagggccaac gtagtaagaa 60
atttcagag aaaatgctta ccagggcaag cctgtntaaa acaccaaggg gaagcaaact 120

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ccagttaatt	ctgggctggg	ttggtgacta	aggttgaggt	tgatctgagg	ttgagacctt	180
cctcttttga	tcaccagctt	tcagctcagg	gcctgccaat	gagtaaatga	tagttaacag	240
gtcctggagg	ggaatcagct	gccagatac	aaagatggga	ttcaggtggc	agatggaccc	300
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gttcattaac	tgagattaac	cttccttgag	ttttctcaca	ccaaggtgag	gaccatgtcc	720
ctgtttccat	cactccctct	ccttctcctg	agtatggtgg	cagcgtctta	ctcagaaact	780
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ggtaoctgtt	gggctgttct	gtctctgcaa	ttctttacct	tccagaggaa	actgcctggg	960
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aggaaagtgg	cccacaggtc	aggccatccc	gtgggacaca	ggatgaattt	ttcttctctg	1140
ggtcattgtc	atgtcagacc	cctattcact	tcagtaggga	tggcaccagg	ttcaagaggc	1200
caaagaagag	atggagtcag	caaacaaaca	taggttttac	tgggggaatc	tgtttacagg	1260
gagatccagc	agcagtgggc	tggacaggag	aacaacaact	actggtaaaa	acaaatgcag	1320
ttaattttca	ctttgcaccc	tccttcagc	aacctccacg	tggcaacttt	atttcttaag	1380
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tgggtcaagg	tctcccttct	cctgagaagg	gattgggcat	caaactcttg	aagagagaga	1500
gcaagaacat	agatattaag	tcacatttcc	tttgtcttcc	aacaggccaa	gggctcagag	1560
gcttacaggg	ccccctgga	aagttggggc	ctccaggaaa	tccagggcct	tctgggtcac	1620
caggaccaa	gggccaacaa	ggagaccctg	gaaaaagtcc	gggtaaggac	cccagcaagg	1680
tctgagctga	cttcacccag	ggttctgaga	ccttgagtat	ctggtaagag	gtgccccctc	1740
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<210> 49
 <211> 1802
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (96)..(96)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (649)..(649)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (884)..(884)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
 <221> misc_feature
 <222> (875)..(875)
 <223> n is a nucleotide selected from a, g, c, or t

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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
 gtcttgagg ggaatcagct gccagatac aaagatggga ttcagggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatatt gttctcactg 420
 ccacngaaag catgtttata gtcttcagc agcaacgcca ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac 540

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gcagtgtcac aaggaatggt tactttttcca aatccccagc tagaggccag ggatgggtca 600
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gttcattaac tgagattaac cttccctgag ttttctcaca ccaagggtgag gaccatgtcc 720
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caggaccaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac cccagcaagg 1680
tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgccccttc 1740
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tc 1802

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<210> 50
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>

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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (875)..(875)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (884)..(884)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <223> n is a nucleotide selected from a, g, c, or t

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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
 gtcttgaggg ggaatcagct gccagatac aaagatggga ttcaggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatatt gttctcactg 420
 ccacngaaag catgtttata gtcttcagc agcaacgcc ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac 540
 gcagtgtcac aaggaatgtt tacttttcca aatccccagc tagaggccag ggatgggtca 600
 tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt 660
 gttcattaac tgagattaac cttccctgag ttttctcaca ccaagggtgag gaccatgtcc 720
 ctgtttccat cactccctct cttctcctg agtatgggtg cagcgtctta ctcagaaact 780
 gtgacctgtg aggatgcca aaagacctgc cctgcagtga ttgcctgtag ctctccaggc 840
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 ggtacgtgtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg 960
 gatatgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa 1020

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acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc 1080
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tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgcccttc 1740
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tc 1802

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<210> 51
<211> 1802
<212> DNA
<213> Homo sapiens

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<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
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<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
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<222> (875)..(875)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
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 <223> n is a nucleotide selected from a, g, c, or t

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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag 240
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 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatth gttctcactg 420
 ccacngaaag catgtttata gtcttcagc agcaacgcca ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgccctacc tttgttaaag tactagtcac 540
 gcagtgtcac aaggaatgth tactttttcca aatccccagc tagaggccag ggatgggtca 600
 tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt 660
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 ctgtttccat cactccctct ctttctctg agtatgggtg cagcgtctta ctcaaaaact 780
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 ggtacgtgth gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg 960
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 caaagaagag atggagtcag caaacaacaa taggtttttac tgggggaatc tgtttacagg 1260
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tc 1802

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<210> 52
<211> 1802
<212> DNA
<213> Homo sapiens

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<223> n is a nucleotide selected from a, g, c, or t

```

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<220>
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<223> n is a nucleotide selected from a, g, c, or t

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<220>
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<222> (884)..(884)
<223> n is a nucleotide selected from a, g, c, or t

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ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180

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cctcttttga	tcaccagctt	tcagctcagg	gcctgccaat	gagtaaata	tagttaacag	240
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tc						1802

<210> 53
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 <212> DNA
 <213> Homo sapiens

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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (868)..(868)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <223> n is a nucleotide selected from a, g, c, or t

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 ccagttaatt ctgggctggg ttgggtgacta aggttgaggt tgatctgagg ttgagacctt 180
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 gcagtgtcac aaggaatgtt tacttttcca aatccccagc tagaggccag ggatgggtca 600
 tctatttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt 660


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gttcattaac tgagattaac cttccctgag ttttctcaca ccaaggtgag gaccatgtcc 720
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<210> 54
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
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 <222> (868)..(868)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (875)..(875)
 <223> n is a nucleotide selected from a, g, c, or t

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 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
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tc 1802

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<210> 55
<211> 1802
<212> DNA
<213> Homo sapiens

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<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (868)..(868)
<223> n is a nucleotide selected from a, g, c, or t

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<220>

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<221> misc_feature
 <222> (875)..(875)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
 <221> misc_feature
 <222> (884)..(884)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 55
 gaattcctgc cagaaagtag agaggtatatt agcactctgc cagggccaac gtagtaagaa 60
 atttccagag aaaatgctta cccaggcaag cctgtntaaa acaccaaggg gaagcaaact 120
 ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt 180
 cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaata tagttaacag 240
 gtccctggagg ggaatcagct gccagatac aaagatggga ttcaggtggc agatggaccc 300
 gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc 360
 attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccatatt gttctcactg 420
 ccacngaaag catgtttata gtcttcacgc agcaacgcca ggtgtctagg cacagatgaa 480
 cccctcctta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac 540
 gcagtgtcac aaggaatggt tacttttcca aatccccagc tagaggccag ggatgggtca 600
 tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaataatgt 660
 gttcattaac tgagattaac cttccctgag ttttctcaca ccaaggtgag gaccatgtcc 720
 ctgtttccat cactccctct ctttctcctg agtatggtgg cagcgtctta ctcagaaact 780
 gtgacctgtg aggatgcca aaagacctgc cctgcagtga ttgcctgtag ctctccaggc 840
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 ggtacgtgtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg 960
 gatattgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa 1020
 acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc 1080
 aggaaagtgg cccacaggtc aggccatccc gtgggacaca ggatgaattt ttcttctctg 1140
 ggtcattgtc atgtcagacc cctattcact tcagtaggga tggcaccagg ttcaagaggc 1200
 caaagaagag atggagtcag caaacaaca taggttttac tgggggaatc tgtttacagg 1260
 gagatccagc agcagtgggc tggacaggag aacaacaact actggtaaaa acaaatgcag 1320
 ttaattttca ctttgcaccc tccctgcagc aacctccagc tggcaacttt atttcttaag 1380

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ttattgctct caggtgcaca ccatacagtt attgagagca gtgctcagaa aggtcagtcc 1440
tgggtcaagg tctcccttct cctgagaagg gattgggcat caaactcttg aagagagaga 1500
gcaagaacat agatattaag tcacatttcc tttgtcttcc aacaggccaa gggctcagag 1560
gcttacaggg cccccctgga aagttggggc ctccaggaaa tccagggcct tctgggtcac 1620
caggaccaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac ccagcaagg 1680
tctgagctga cttcaccag ggttctgaga ccttgagtat ctggtaagag gtgccccttc 1740
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tc 1802

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<210> 56
<211> 1802
<212> DNA
<213> Homo sapiens

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<220>
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<222> (96)..(96)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (649)..(649)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
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<222> (425)..(425)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (868)..(868)
<223> n is a nucleotide selected from a, g, c, or t

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<220>
<221> misc_feature
<222> (875)..(875)
<223> n is a nucleotide selected from a, g, c, or t

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<400> 56
gaattcctgc cagaaagtag agaggtatth agcactctgc cagggccaac gtagtaagaa 60
atttccagag aaaatgctta cccaggcaag cctgtntaaa acaccaaggg gaagcaaact 120

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ccagttaatt ctgggctggg ttggtgacta aggttgaggt tgatctgagg ttgagacctt	180
cctcttttga tcaccagctt tcagctcagg gcctgccaat gagtaaatga tagttaacag	240
gtcctggagg ggaatcagct gccagatac aaagatggga ttcagggtggc agatggaccc	300
gaagaggaca tggagagaaa gaggaagctc ctacagacac ctgggtttcc actcattctc	360
attccctaag ctaacaggca taagccagct ggcaatgcac ggtcccattt gttctcactg	420
ccacngaaag catgtttata gtcttcacgc agcaacgcc aagtgtctagg cacagatgaa	480
cccctcetta ggatccccac tgctcatcat agtgcctacc tttgttaaag tactagtcac	540
gcagtgtcac aaggaatgtt tactttttcca aatccccagc tagaggccag ggatgggtca	600
tctattttcta tatagcctgc acccagattg taggacagag ggcattgctng gtaaatatgt	660
gttcattaac tgagattaac cttccctgag ttttctcaca ccaaggtgag gaccatgtcc	720
ctgtttccat cactccctct ctttctcctg agtatgggtgg cagcgtctta ctcagaaact	780
gtgacctgtg aggatgcccc aaagacctgc cctgcagtga ttgcctgtag ctctccaggc	840
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ggtaagtgtt gggctgttct gtctctgcaa ttctttacct tccagaggaa actgcctggg	960
gatatgagga gactgatgtc ctatttgagt atatttttct caactatact gtaactcaaa	1020
acagagattc agctcgaatt ccacacagca gtttgtgact aatagttgtc ttgccagccc	1080
aggaaagtgg cccacaggtc aggccatccc gtgggacaca ggatgaattt ttcttctctg	1140
ggtcattgtc atgtcagacc cctattcact tcagtaggga tggcaccagg ttcaagaggc	1200
caaagaagag atggagtcag caaacaacaa taggttttac tgggggaatc tgtttacagg	1260
gagatccagc agcagtgggc tggacaggag aacaacaact actggtaaaa acaaatgcag	1320
ttaattttca ctttgcaccc tccctgcagc aacctccagc tggcaacttt atttcttaag	1380
ttattgctct caggtgcaca ccatacagtt attgagagca gtgctcagaa aggtcagtcc	1440
tgggtcaagg tctcccttct cctgagaagg gattgggcat caaactcttg aagagagaga	1500
gcaagaacat agatattaag tcacatttcc tttgtcttcc aacaggccaa gggctcagag	1560
gcttacaggg cccccctgga aagttggggc ctccaggaaa tccagggcct tctgggtcac	1620
caggaccaa gggccaaaaa ggagaccctg gaaaaagtcc gggtaaggac cccagcaagg	1680
tctgagctga cttcaccacag ggttctgaga ccttgagtat ctggtaagag gtgccccttc	1740
tcctgttct tcaaaggaag atacccaaat ttgctttctg acccagtgcc ctcagccctc	1800

tc

1802

<210> 57
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<223> n is a nucleotide selected from a, g, c, or t

<220>
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<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 57
ngtgatggca ccaaggna

18

<210> 58
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<223> n is a nucleotide selected from a, g, c, or t

<220>
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<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 58
ngtgatgaca ccaaggna

18

<210> 59
<211> 18
<212> DNA
<213> Homo sapiens

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<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 59
ngt gatgtca ccaaggna

18

<210> 60
<211> 18
<212> DNA
<213> Homo sapiens

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<223> n is a nucleotide selected from a, g, c, or t

<220>
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<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 60
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18

<210> 61
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 61
ggt gatgnca ccaaggna

18

<210> 62
<211> 18
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> (8)..(8)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 62
agtgatgnca ccaaggna 18

<210> 63
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<222> (8)..(8)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 63
tgtgatgnca ccaaggna 18

<210> 64
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<222> (8)..(8)
<223> n is a nucleotide selected from a, g, c, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a nucleotide selected from a, g, c, or t

<400> 64
cgtgatgnca ccaaggna 18

<210> 65
 <211> 18
 <212> DNA
 <213> Homo sapiens

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<220>
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 <222> (8)..(8)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 65
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18

<210> 66
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 <212> DNA
 <213> Homo sapiens

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 <222> (1)..(1)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (8)..(8)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 66
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18

<210> 67
 <211> 18
 <212> DNA
 <213> Homo sapiens

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 <222> (1)..(1)
 <223> n is a nucleotide selected from a, g, c, or t

<220>
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 <222> (8)..(8)
 <223> n is a nucleotide selected from a, g, c, or t

<400> 67
ngtgatgnca ccaaggta 18

<210> 68
<211> 18
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(1)
<223> n is a nucleotide selected from a, g, c, or t

<220>
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<222> (8)..(8)
<223> n is a nucleotide selected from a, g, c, or t

<400> 68
ngtgatgnca ccaaggca 18

<210> 69
<211> 30
<212> DNA
<213> Homo sapiens

<400> 69
acacacccgt ttccaccctg gagaggccag 30

<210> 70
<211> 30
<212> DNA
<213> Homo sapiens

<400> 70
tgcgcagtgc tggagtgcgg cctccgctct 30

<210> 71
<211> 19
<212> DNA
<213> Homo sapiens

<400> 71
cctgtgagga actactgtc 19

<210> 72
<211> 20
<212> DNA

<213> Homo sapiens

<400> 72

ggtgcacggt ctacgagacc

20